Advanced Automated Step Welding System for Bore, Flange, and Valve Repair.

The Climax BW3000 AutoBoreWelder is an automated step welding system that provides a new degree of welding performance and precision. Weld time is dramatically reduced while producing precise, uniform, high quality welds as compared to hand welding techniques.

Unmatched Weld Quality and Precision

- Provides complete weld coverage at the start and finish of the bore
- Reaches up to 5 feet (152.4 cm) into the bore. Using torch extension support, can extend upward using extended reach torch options.
- Lays up to 5 lbs (2.27 kg) of metal per hour.
- Arc time increases 50 - 100% over hand-welding, cutting weld time in half.

Built-In Cost Savings

- Precise, uniform welds means less wire is consumed, reducing cost.
- All configurations come ready for a push-pull wire feeder which prevents wire buckling and waste when using low column-strength wire.
- Consistent and uniform weld reduces cutting tool wear, reducing cutting time by up to 50%.

Single Point PLC-Based Control System Enhances Operator Safety and Control of Welding Process

- Adjust all welding functions from one central location.
- Weld operator safety is enhanced by allowing operator to stand back from the weld as it is being laid.
- Quickly adjust “step” size and direction, rotation speed and direction, wire feed rate, arc voltage, arc interrupt, contractor control, gas purge and extended utilization of Auto-Skip function.

Flexible and Versatile

- Welds in any orientation: vertical, horizontal, or inverted.
- Allows alternating of uphill and downhill welds in a horizontal bore when welding multiple passes
- Patented “offset head” provides radial adjustments of the torch while maintaining proper torch angle in relation to the work piece.

- Wide range of travel speeds and amperage for challenging in-field conditions or working with exotic metals.
- With proper options, can weld with any wire - stelite, nickel, exotic metals.
- Can be configured to perform clad overlay with nickel alloys, bronze, and exotic metals.
- Four operating modes available: Auto-Skip, Pie, Carriage Return, and Contiuous Weld.
- Patented step process outperforms spiral welding by providing complete weld coverage with infinitely adjustable step, allowing bead placement from 0.40 - 0.220 inches (1.0 - 5.6 mm).
- Auto-skip feature allows “weld only” or “skip only” areas to be designated.
- Allows rapid completion of work on out-of-round bores, bores with keyways.
- Precisely welds conical valve seats.

One Setup for Welding & Boring

- Climax BoreWelder Interface Kit simplifies the boring & welding setup process.
- Quickly attach the BW3000 AutoBoreWelder directly to the Climax BB3000, BB4500 or BB5000 Boring Machine mounting fixtures.
- Interface kit makes it easy to switch between bore welding and line boring without losing bearing alignment.
- Interface kit ensures perfect alignment for both welding and machining.
- One setup for both welding and boring saves time and gets the job done quickly.

Weld & Bore at the Same Time

- Weld one section while boring out another, using multiple bearing mounts.
- Simultaneous operation cuts work time in half!

Rugged, Fitted Protective Case for Easy, Safe Transport:

- Packaged in heavy-duty, shock-resistant case for safe, dust and water-proof storage, convenient organization and easy transport of the BW3000 AutoBoreWelder and its components.
- Select from shop-style wire feeder, or enclosed field-style wire feeder in shock-resistent waterproof case.

SPECIFICATIONS, APPLICATIONS

	US	Metric
Welding Process	MIG (GMAW)	
Axial Travel	6 or 12 inches (longer reach requires torch extension)	152.4 or 304.8 mm
Step Range	0.040 - 0.220 inches	1.0 - 5.6 mm
Wire Diameter Range	0.023 - 0.045 inches	0.58 - 1.14 mm
Amperage Rating	175A Continuous	
Total Extended Reach	39 inches	990.6 mm
Torch Welding Diameter Ranges		
ID Bores #00 through #12	0.88 - 54 inches	22.4 - 1371.6 mm
OD Torches, max dia.	14, 28, or 56 inches	355.6, 711.2 or 1422.4 mm
Face Torch	1.0 - 20.0 inches	25.4 - 508.0 mm
Torch Extensions	3, 6, 12, and 18 inches	76.2, 152.4, 304.8 and 457.2 mm
Unsupported Torch Reach	60 inches	1524.0 mm
Control Box Voltages	120 VAC 50/60Hz or 230 VAC 50/60 Hz	
Wire feeder 4-roll drive system accepts standard spools	30 lb spools	13.6 kg spools
Power Supply Requirements:	Recommended 300 Amp Rating CV power source with remote voltage control capability (power supply not included in BW3000 AutoBoreWelder Package)	

Weights and Dimensions

Weights and Dimensions vary for each package. Final weights will be determined at the time of your order;

Standard BW3000 is shipped in 3 boxes:
(Weights and Dimensions are approximate)

Box #1	8 x 16 x 19 Inches (203 x 407 x 483 mm)
Weight:	21 Lbs (9.53 kg)
Box #2	9 x 18 x 21 (229 x 457 x 533 mm)
Weight:	27 Lbs (12.25 kg)\
Box #3	20 x 30 x 13 Inches (508 x 762 x 330 mm)
Weight:	106 Lbs (48 kg)

APPLICATIONS

The BW3000 is widely used by these industries:

Mining & Heavy Construction
Power Generation
Pulp & Paper

Typical Applications:

- Bores, pivot points, buckets and hitches
- Valve and pump repairs
- Gears and gear boxes
- Motor housings and shafts
- Electric motor repair
- Loader bucket & hitch repair
- Nozzles on pressure vessels and heat exchangers
- Compressors and turbines
- Shaft OD repair
- Mud pumps
- Hydraulic cylinder eyes
- Presses
- Castings and injection molds
- Continuous miners and drag lines
- Rotary crushers
- Jaw crusher pitman arms
- Whole tree chippers

All dimensions should be considered reference. Contact your Climax Representative for precision dimensions. Specifications are subject to change without notice. There are no systems or components on this machine that are capable of producing hazardous EMC, UV or other radiation hazards. The machine does not use lasers nor does it create hazardous materials such as gasses or dust.

Climax Portable Machining & Welding Systems Web site: **climaxportable.com**
Worldwide Phone: **1.503.538.2185** N. America Toll-Free: **1.800.333.8311** Fax: **1.503.538.7600** E-mail: Info@cpmt.com

TOOL CONFIGURATIONS

Configure your BW3000 in 15 easy steps.

To configure your BW3000 Boring Machine:

1 Select a Base Unit
2 Select a Connector
3 Select Controls
4 Select Control Cables
5 Select Power Supply Cables
6 Select a Wire Feeder
7 Select Wire Feed Accessories
8 Select a Top Mount Feeder
9 Select Wire Feed Conduits
10 Select Torches
11 Select Specialty Torches
12 Select Mounting Options
13 Select Torch Extensions
14 Select Consumables
15 Select Miscellaneous Accessories

To configure the boring machine you require, simply select the option you need in each step, then contact your Climax representative.

1 Base Unit (All machines are AutoSkip and Push/Pull Ready. All wire feeders are also Push/Pull Ready)

Tool Kit (Wrenches, Manual, Gloves), Packaging, Rod, Collar, Torch Extension Kit, Consumables Package, Positive Weld Cable, Shield Gas Hose, and Extra Liner.	**69970**

2 Connectors

Metal

Welding Head 6 inch (152.4 mm) Auto Skip Push/Pull Ready	**54421**
Welding Head 12 inch (304.8 mm) Auto Skip Push/Pull Ready	**54425**

Plastic

Welding Head 6 inch (152.4 mm) Auto Skip Push/Pull Ready	**54419**
Welding Head 12 inch (304.8 mm) Auto Skip Push/Pull Ready	**54423**

3 Controls

Metal

120V Controller	**70458**
230V Controller	**70463**

Plastic

120V Controller	**70460**
230V Controller	**70463**

4 Control Cables

Metal

Control Cable 8 foot (2.4 m)	**58276**
Control Cable 15 foot (4.6 m)	**58615**

Plastic

Control Cable 8 foot (2.4 m)	**29866**
Control Cable 15 foot (4.6 m)	**35400**
Control Cable 20 foot (6.1 m)	**61429**

5 Power Supply Cables

Metal Connectors

Power Supply Cable Assembly, 19 PIN ESAB, 25 foot (7.6 m)	**58679**
Power Supply Cable Assembly, Eutectic Pulsarc 6000 or ESAB LAI 550P, 25 foot (7.6 m)	**69915**
Power Supply Cable Assembly, Lincoln Multiweld 350 6 Pin, 25 foot (7.6 m)	**53985**
Power Supply Cable Assembly, Lincoln 14 Pin, 25 foot (7.6 m)	**53991**
Power Supply Cable Assembly, Lincoln 14 Pin, 50 foot (15.2 m)	**53988**
Power Supply Cable Assembly, Millermatic Welders 10-Pin, 25 foot (7.6 m)	**68227**
Power Supply Cable Assembly, Miller 14 Pin, 25 foot (7.6 m)	**53249**
Power Supply Cable Assembly, Miller 14 Pin, 50 foot (15.2 m)	**58564**
Power Supply Cable Assembly, Blank End	**53990**

Plastic Connectors

Power Supply Cable Assembly, ESAB 350MPI 14 Pin, 25 foot (7.6 m)	**69916**
Power Supply Cable Assembly, Eutectic Pulsarc 6000 or ESAB LAI 550P, 25 foot (7.6 m)	**45490**
Power Supply Cable Assembly, Lincoln Multi Weld 6 Pin, 25 foot (7.6 m)	**55327**
Power Supply Cable Assembly, Lincoln 14 Pin, 25 foot (7.6 m)	**32042**
Power Supply Cable Assembly, Miller Millermatic 10 Pin, 25 foot (7.6 m)	**46670**
Power Supply Cable Assembly, Miller X mT 14 Pin, 25 foot (7.6 m)	**34217**
Power Supply Cable Assembly, Miller 14 Pin W/ 100V Pigtail, 25 foot (7.6 m)	**29824**
Power Supply Cable Assembly, Miller Deltaweld 5 Pin, 25 foot (7.6 m)	**69918**
Power Supply Cable Assembly, Blank One End, 25 foot (7.6 m)	**36874**
Power Supply Cable Assembly, Universal, 25 foot (7.6 m)	**69920**

6 Wire Feeders, Push/Pull Ready

Metal

Wire Feeder, Shop Style, Push/Pull Ready 24 VAC	**65054**
Wire Feeder, Enclosed, Push/Pull Ready 24 VAC	**66946**

Plastic

Wire Feeder, Shop Style, Push/Pull Ready 24 VAC	**69812**
Wire Feeder, Enclosed, Push/Pull Ready 24 VAC	**44993**

7 Wire Feed Accessories

(recommended when using push/pull wire feeder)

Wire Straightener	**35357**

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TOOL CONFIGURATIONS

8 Top Mount Feeder

Metal

Top Mount Feeder	**64288**

Plastic

Top Mount Feeder	**44992**

9 Wire Feed Conduits

Wire Feed Conduit 2 foot (0.6 m)	**31894**
Wire Feed Conduit 3 foot (0.9 m)	**31895**
Wire Feed Conduit 4 foot (1.2 m)	**35574**
Wire Feed Conduit 5 foot (1.5 m)	**34813**
Wire Feed Conduit 6 foot (1.8 m)	**69889**
Wire Feed Conduit 8 foot (2.4 m)	**69890**
Wire Feed Conduit 10 foot (3.0 m)	**34043**
Wire Feed Conduit 12 foot (3.7 m)	**55707**
Wire Feed Conduit 15 foot (4.6 m)	**45256**

10 Torches

#00 to #5 Torch Kit 0.88 to 13 inch (22.4 to 330.2 mm)	**69896**
#00 to #5 Torch & Bearing Clearance Kit 0.88 to 27 inch (22.4 to 685.8 mm)	**70197**
Torch Bearing Clearance Package 12 to 27 inch (304.8 to 685.8 mm)	**63916**
#00 Torch, 0.88 - 1.8 inch (22.4 - 45.7 mm) dia.	**29063**
#0 Torch, 1.75 - 3 inch (44.5 - 76.2 mm) dia.	**28448**
#1 Torch, 2.75 - 5.5 inch (69.9 - 139.7 mm) dia.	**29064**
#2 Torch, 4.5 - 7.5 inch (114.3 - 190.5 mm) dia.	**29032**
#3 Torch, 6 - 9 inch (152.4 - 228.6 mm) dia.	**29033**
#4 Torch, 8 - 11 inch (203.2 - 279.4 mm) dia.	**29034**
#5 Torch, 10 - 13 inch (254.0 - 330.2 mm) dia.	**29035**
****** NOTE: #6 - #12 Torches Require Counterbalance ******	
#6 Torch, 12 - 15 inch (304.8 - 381.0 mm) dia.	**30345**
#7 Torch, 14 - 17 inch (355.6 - 431.8 mm) dia.	**31792**
#8 Torch, 16 - 19 inch (406.4 - 482.6 mm) dia.	**30346**
#9 Torch, 18 - 21 inch (457.2 - 533.4 mm) dia.	**30710**
#10 Torch, 20 - 23 inch (508.0 - 584.2 mm) dia.	**30711**
#11 Torch, 22 - 25 inch (558.8 - 635.0 mm) dia.	**30712**
#12 Torch, 24 - 27 inch (609.6 - 685.8 mm) dia.	**30713**
#13/24 Torch Kit with Belt Pulley & 10 inch (254.0 mm) Radial Mount	**70196**

11 Specialty Torches

Trammel OD Torch Package - up to 14 inch (355.6 mm) Dia.	**27013**
Trammel Torch 28 inch (711.2 mm) Maximum OD Capability	**38506**
Extended Trammel Torch Dia. to 56 OD	**53004**
Face Torch 8 inch (203.2 mm)	**28186**
Conical Seat Torch	**28020**
Compact Face Torch 6 inch (152.4 mm) Swing	**48013**
Torch Counterbalance	**30756**

12 Mounting Options

Adjustable Base	**29037**
Adapter Kit to BB3000 1-1/4 inch (31.8 mm) Bar	**26795**
Adapter Kit to BB4500 1-3/4 inch (44.5 mm) Bar	**43731**
Adapter Kit to BB5000 2-1/4 inch (57.2 mm) Bar	**26518**
Tool Alignment for BB3000 1-1/4 inch (31.8 mm) Bar	**26656**
Tool Alignment for BB4500 1-3/4 inch (44.5 mm) Bar	**36062**
Radial Mount 5 inch (127.0 mm), Radius Standard Spacer	**28208**
Radial Mount 10 inch (254.0 mm), Radius Spacer	**35006**
Weld Head Support Rod	**30773**
Mounting Rod Extender	**30831**

13 Additional Torch Extensions

Torch Extensions 3 to 12 inch (76.2 - 304.8 mm) Includes 1 each 3, 6, & 12 inch (76.2, 152.4, & 304.8 mm)	**69895**
Torch Extension 3 inch (76.2 mm)	**29038**
Torch Extension 6 inch (152.4 mm)	**29039**
Torch Extension 12 inch (304.8 mm)	**29040**
Torch Extension 18 inch (457.2 mm)	**29065**
Torch Extension Support Kit	**33256**

14 Additional Consumables

Welding Tip #00, 0.035 inch (0.9 mm) (Each)	**69521**
Welding Tip #00, SPEZ Feed 0.045 inch (1.2 mm)	**69554**
Welding Tip #0, Standard 0.035 inch (0.9 mm)	**69520**
Welding Tip #0, Large Radius 0.035 inch (0.9 mm)	**67997**
Welding Tip #0, Standard Radius 0.045 inch (1.2 mm)	**68622**
Welding Tip #0, SPEZ Feed 0.045 inch (1.2 mm)	**69555**
Welding Tip, 0.035 inch (0.9 mm)	**69865**
Welding Tip, 0.045 inch (1.2 mm) Dia.	**70149**
Welding Tip, 0.030 inch (0.8 mm) For 11-30	**70150**
Welding Tip, 0.035 inch (0.9 mm) (11-35) Chromium/Zirconium	**62642**
Welding Tip #00, 0.035 inch (0.9 mm) Chromium/Zirconium	**69891**
Welding Tip #0, Standard 0.035 inch (0.9 mm) Chromium/Zirconium	**70204**
Welding Tip 0.045 inch (1.2 mm) Dia. Chromium/Zirconium	**70205**
Welding Nozzle (For All Torches Except #00 & #0) (1 Ea) Standard 21-62)	**69866**

15 Miscellaneous Accessories

Remote Arc Interrupt Cable	**53184**
Stick Electrode Holder	**36169**

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ACCESSORIES, WELD RANGE INFO

Tips

Welding Tip (Each) 0.030 (fits all standard torches)	**70150**
Welding Tip (Each) 0.035 (fits all standard torches)	**69865**
Welding Tip (Each) 0.045 (fits all standard torches)	**70149**
Welding Tip (Each) #00 .035 (fits #00 torch)	**69521**
Welding Tip (Each) #00 .045 (fits #00 torch)	**69554**
Welding Tip (Each) #0 .035 (fits #0 torch)	**69520**
Welding Tip (Each) #0 .045 (fits #0 torch)	**69555**

Welder Power Supply

Power supply, 208 - 575V, Miller XMT 304 50/60 Hz	**42707**
Power supply, 208 - 575V, 50/60 Hz as above but with Aux 120V\ Outlet	**41615**

Mounting Hardware

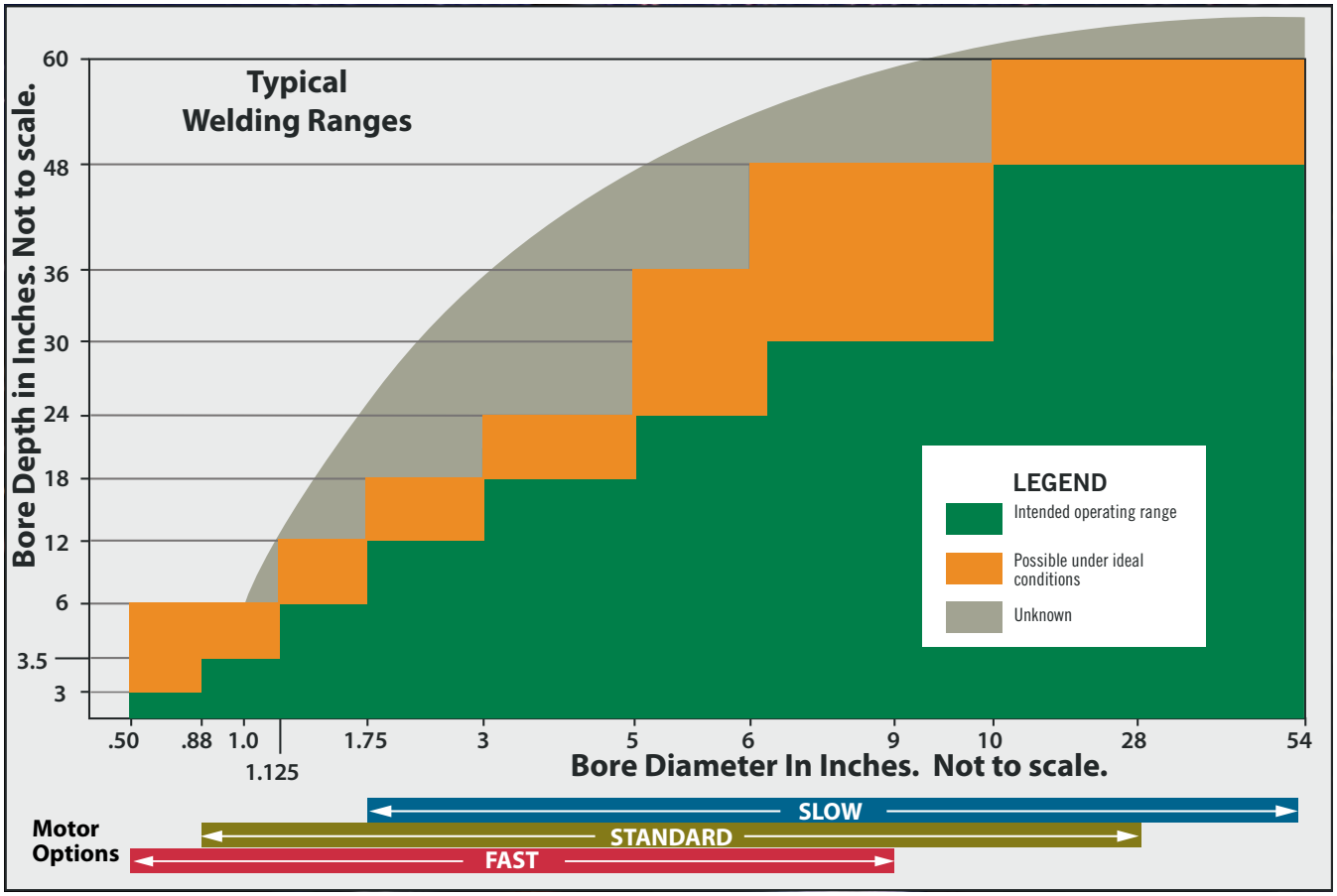
Adjustable base (included in select packages)	**29037**
Radial mount 5 inches (127 mm) (included in select packages)	**28208**
Radial mount 10 inches (254 mm)	**35006**
Mounting rod (included in all packages)	**30773**
Mounting rod extender	**30831**

Other Accessories

Welding wire, cast controlled, 0.035, 33 lb (15 Kg) Spool National Standard –ER70-S6	**30792**
Diffusers (each)	**69778**
Liner 0.023/0.045, 16 feet (4.9 m) long	**40424**
Set-up & operations video CD	**40439**
Welding ground wire with clamp, 37 feet (11.3 m)	**38276**
Push/pull power feed system	**44992**
Gas regulator	**34397**

Some BW3000 parts ship in sturdy Pelican™ cases (Case sizes and types vary by model)

WELD RANGE INFORMATION



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CLIMAX GLOBAL LEARNING CENTER

Climax has been teaching the fundamentals and fine points of portable machine tool operation for practically as long as we've been inventing and building the tools.

At the Global Learning Center situated in our corporate headquarters near Portland, Oregon, we provide training for machine tool operators on portable machine tool safety and machine setup and operation. Trainees also receive technical tips and tools to improve operational efficiencies, with the vast majority of every program devoted to hands-on activities and skill development.

The Climax instructional team includes specialists in shipbuilding, power generation, civil engineering, bridge re-building, petrochemical and other industries.

Whether it's a regularly scheduled course at the Global Learning Center, or custom curriculum conducted at your facility, your machinists will benefit from courses developed by some of the most respected authorities in the business.

Call us today to register for a regularly scheduled class, or talk to us about how we can customize a training program for your specialized application.

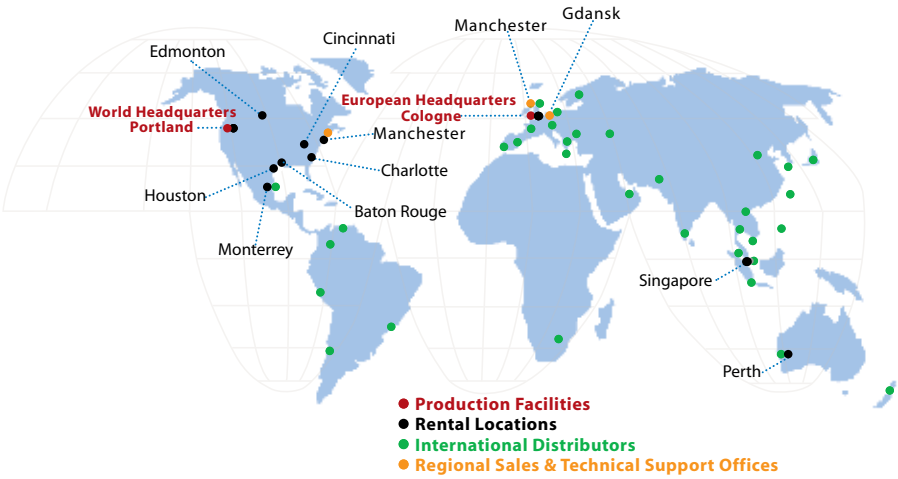
Call Climax for:

On-site Training
Need some refresher courses in setting up and operating your Climax machine tool?

Special Projects
Climax has been solving complicated on-site machining and welding problems for our customers since 1964.

Rentals
With 16 worldwide rental depot locations, you are never far away from a Climax portable machine tool.

Climax Global Locations



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